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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,648	06/14/2001	Neal R. Butler	L0501/7035	6945

23628 7590 10/28/2003

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT PAPER NUMBER

2863

DATE MAILED: 10/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,648

Applicant(s)

BUTLER, NEAL R.

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

The Amendment filed on October 14, 2003 has been acknowledged.

Terminal Disclaimer

1. The terminal disclaimer filed on October 14, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 6,274,869 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 2, 10, and 21, "... wherein the means for providing at least one time-varying compensation signal includes means for providing a different time-varying compensation signal for at least two sensors of the plurality of sensors" is not described in the specification.

Page 2, lines 2-7 and 15-20, of the specification does not describe "the means for providing at least one time-varying compensation signal includes means for providing a

different time-varying compensation signal for at least two sensors of the plurality of sensors”.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Butler (WO 97/01926).

Butler discloses all the claimed features of the invention including:

- an apparatus and method for compensating errors in at least a first image signal (Fig.

1) comprising:

- a first sensor (sensor in array 102) of an array (102) of sensors to detect radiation (page 6, lines 26-27) and to output a first image signal (343) based on the radiation detected by the first sensor (Fig. 1);

- offset correction circuitry (302) to compensate errors in at least the first image signal and to output at least a corrected first image signal (page 5, line 28 – page 6, line 4), wherein the offset correction circuitry includes means for providing at least one

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time-varying compensation signal that is added to the first image signal to generate the corrected first image signal (page 2, lines 15-17, Fig. 4);

- the apparatus comprises a plurality of sensors (sensors in array 102) including the first sensor, the plurality of sensors outputting respective image signals based on the radiation detected by each sensor of the plurality of sensors (Fig. 1), and wherein the means for providing at least one time-varying compensation signal includes means for providing a different time-varying compensation signal for at least two sensors of the plurality of sensors (page 32, lines 10-13);

- the means for providing at least one time-varying compensation signal includes a capacitor (16, 180);

- the at least one time-varying compensation signal is based on a charging and a discharging of the capacitor (Fig. 4);

- the means for providing at least one time-varying compensation signal includes a compensating source to compensate changes in at least the first image signal due to current-induced heating of at least the first sensor (page 22, lines 11-17);

- the means for providing at least one time-varying compensation signal includes means for providing a variable current (page 22, lines 14-15);

- the means for providing the variable current includes means for adding the variable current to the first image signal such that an average value of the variable current and the first image signal remains essentially constant during a signal sampling period (page 2, lines 27-29);

- the means for providing at least one time-varying compensation signal includes means for providing a variable voltage (page 8, lines 8-9);

- the means for providing the variable voltage includes means for adding the variable voltage to the first image signal such that an average value of the variable voltage and the first image signal remains essentially constant during a signal sampling period (page 18, lines 2-5);

- the first sensor is a microbolometer (page 6, line 27).

Response to Arguments

4. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

October 27, 2003